knowledge of Galileo’s education, language, style, as well as his salary to understand his science, not to supplant it. It may be interesting to know that Galileo held a court appointment but more important to realize, for instance, that he did not use algebra and never wrote an equation in his life, not even in his private papers. Nor did he use decimal fractions, which were first introduced in 1585. He adhered to the Euclidean theory of ratios and proportionality among mathematically continuous magnitudes, and this is the technique that played an important part in his analysis of motion. When he began investigating the properties of falling bodies, he could not legitimately measure speed as a kind of “ratio” of a distance to a time. In principle those entities had no ratio, properly speaking, for in Euclid’s mathematics “ratio” was defined as a relation between magnitudes of the same kind, for example, two distances or two times. To express a relation between distances and times of motion, it was necessary to establish a proportionality, that is, a sameness of ratio for two distances and two times. In uniformly accelerated motions, proportionality exists between distances and the squares of the times. How Galileo came to see this is linked with discovery of the isochronism of the pendulum.

The Galileo’s trial is generally considered as the prime example of the conflict between science and religion. The author stresses the efforts made by Paul John Paul II to confront the issue, and the fact that the modern Church, however belatedly, deplores such encyclical as Mirari Vos, published by Pope Gregory XVI in 1832, where we find condemned, among many other things, “that absurd and erroneous proposition which claims that liberty of conscience must be maintained for everyone”. The Galileo Affair is a constant reminder that where there is no freedom there is no science and no genuine theology.

Flavia Maraccci has made a substantial contribution to the interpretation of Galileo’s achievements, and to the larger implication of the role of science in the development of modern civilization.

WILLIAM R. SHEA

ÉDITIONS, TRADUCTIONS / EDITIONS, TRANSLATIONS


The book under review deals with a very special spectrum of questions belonging to a major issue in the history of science. It has important implications